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Abbreviations: AHI, apnoea-hypopnea index; AHI_{Flow}, residual events; BMI, body mass index; CBF, cerebral blood flow; CPAP, continuous positive airway pressure; CVR, cerebrovascular reactivity; HbO_2, oxyhemoglobin; HbTot, total hemoglobin; HHb, deoxyhemoglobin; MRI, magnetic resonance imaging; OSA, obstructive sleep apnoea; NIRS, near-infrared spectroscopy; $P_{ET,CO2}$, end-tidal partial CO_2 pressure; TSI, tissue saturation index; V_E, minute ventilation; VO_{2peak}, peak oxygen consumption.